

Fox (L.W.)

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Eye-ball.





EVISCERATION OF THE EYE-BALL.

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THIS operation consists in first excising the cornea, then removing the contents of the eye-ball and replacing the vitreous with a glass globe.

The cosmetic effect of an artificial eye is nearly always disappointing to the individual wherever he goes, and while the sinister stare may in a measure be minimized by glasses, yet the self consciousness of a defect to the individual always remains the same. Many patients, especially females, will wear a shell (artificial eye) over a stump, irrespective of the irritation thus produced and the very great risk of exciting such a grave disease as sympathetic ophthalmia.

We are indebted to Mr. Mules for devising a means of preventing the burial of the artificial eye in the orbit. The operation was intended as a preventive of sympathetic ophthalmia, by removing the contents of the globe, leaving only the sclerotic coat behind, and also to make a better support for the artificial eye. Mules performed his first operation in October, 1884, since when he has operated many times.

Fröhlich, in 1881, was the first surgeon to perform evisceration. He named the operation "excochleation," but seemingly did not carry his researches very far. Müllder carried out the experiments on rabbits and the cadaver in 1884, while Graefe, in 1884, performed the same operation for the prevention of purulent meningitis. Mules' operation differs from the others in the introduction of a hollow glass globe into the cavity of the denuded sclera; his original operation has been somewhat modified by Drs. Brudnell Carter and T. Herbert Bickerton.

In 1885, I performed the operation twice in the Germantown Hospital, but the reaction was so great, including tremendous swelling of the orbital tissue and eye-lids, great pain and an elevation of temperature, (105 in one patient, 105.5 in a second,) I felt that discretion was the better practice and removed both glass globes, later on removing the small stumps of the atrophied eye-balls. During the summer of 1893, while in Liverpool, Mr. Bickerton brought to my notice three patients upon whom he had recently operated. The cosmetic effect was so beautiful that I again became deeply interested and gathered renewed courage at his success. I also had the opportunity of witnessing the operation at the Liverpool Infirmary, by Mr. Bickerton, and also the after treatment. To see a skilled operator carrying out the technique of an operation is infinitely better than to try to follow the details of a written description, be it ever so clear and concise.

The operation is performed under ether and is essentially as follows: The eye is thoroughly irrigated with a 1 to 1000 corrosive sublimate solution.

The conjunctiva is dissected from its corneo-scleral attachment back to about the equator of the eye-ball, the muscles not being interfered with, then the cornea is excised. This is best done with a large Beer's knife as in performing a flap operation for cataract; the lower half of the cornea is removed with a curved scissors and the contents of the globe are taken out with a small scoop devised for the purpose. Great care is necessary to remove the ciliary bodies and choroid and the head of the optic nerve, leaving the clean, white sclera. Mr. Carter has devised a rubber bulb which is inserted into the scleral cavity and inflated with air, to produce pressure on the central artery to prevent hemorrhage. As this appliance has not been a success with me, I pack the scleral cavity with sterilized cotton; after waiting a few minutes, this is removed and the contents of the scleral cavity are again thoroughly irrigated with a hot antiseptic fluid.*

A sterilized glass globe which is best suited to the case, is then inserted with a specially devised instrument, the sclera is slit vertically so that the edges may be drawn together and held by stitches of fine catgut, completely hiding the glass ball. The orbit is again thoroughly irrigated with the hot solution and the socket packed with sterilized cotton, over which is bound a sterilized bandage and the patient is put to bed.

The subject upon whom I performed this operation, June 29th, 1894, at the Medico-Chirurgical Hospital, was a young Assinaboine Indian from Montana, now at the Carlisle Indian School. He was brought to the Hospital by Dr. Montezuma, to have the eye-ball enucleated on account of pain and much discomfort. As near as we could get at the history of the loss of the eye, it was this: about three years ago, while on the plains, an inflammation of the left eye took place which gradually progressed to an ulceration of the cornea, and finally, to complete destruction of this part of the eye. Instead of removing the eye-ball, a Mules' operation was performed, under ether. The details of the operation were carried out without complication and the patient put to bed.

The orbit was examined at the end of twenty-four hours. No untoward symptoms were present excepting a slight swelling of the upper eye-lid. Towards evening the eye-ball became somewhat painful and the patient did not rest well during the night. Temperature 102°. The next day the temperature fell to 99°. More swelling of the eye-lids appeared with considerable chemosis of the conjunctiva but no discharge of pus. Chloral and a

*The following is the formula for the lotion I use in all operations of the eyes:

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Hydrarg. Bichlor.	gr. 1-50
Zinci Sulpho-carbolatis	grs. xxx.
Aq. Ment. Pip.	3 ii.
Aq. Camph.	
Aq. Destil. aa	3 ii.
M. Sol. ft.	

bromide were given to quiet the pain and hot fomentations were applied to the eye-lids. On the third day the conjunctiva became very œdematous and protruded between the eye-lids, otherwise the patient's condition was about the same as before. The internal treatment at this time was Hydrarg. Bichlor., gr. 1-32, Potass. Bromidi, Potass. Iodidi, aa gr. x., three times daily. To the protruding conjunctiva pressure bandages were applied, which restricted the protrusion.

The temperature fluctuated about the 99° line until July 7th, when it fell to normal and the various inflammatory conditions subsided. At the end of the week I removed the stitches from the conjunctiva. The sclerotic swelling did not subside for ten days when the pain disappeared, and at no time during his residence at the Hospital did it return.

The operation was entirely successful, affording a beautiful support for the artificial eye which was adjusted July 18th. The artificial eye stood out full and prominent with almost perfect movement, a decided improvement over the results of the old operation of enucleation.

On October 11th, the boy met with a peculiar accident which brought him back to the Hospital. While fastening a cow in the stable, the animal tossed her head and the horn struck the boy on the nasal side of the orbit; the artificial eye was not broken, but was pushed well into the orbit, causing much tenderness but no swelling, the following day. The patient was kept in the Hospital for a week, and was sent home, wearing the artificial eye without discomfort.

I fail to see how it is possible, in any way, to break the glass ball, embedded, as it is, in fat and guarded with a casing of sclerotic tissue. From a cosmetic standpoint, this operation is perfection. The comfort and freedom from secretion are certainly greater than with the old method.

Case 2.—On October 26th, I performed the above operation on a young woman, a patient of Dr. Foster Frutchev. She had been wearing an artificial eye over the blind eye; the result was that she had symptoms of sympathetic irritation, and pain in the partially atrophied eye-ball. The operation was carried out in detail, as above described. Upon removing the cicatricial cornea, I found the scleral cavity filled with a bony mass, round, and shaped exactly like a small acorn. This growth of bone was also a very important factor in the causation of pain. The bone was growing larger and the sclerotic coat was restricting it, hence the pain. The bone was removed without difficulty and given to Professor Laplace for microscopic examination. The patient had no untoward symptoms. The temperature ran up to 101° the first day after the operation, and on the third, since when it has remained about normal. Whether I unconsciously made some improvement in my technique or whether my asepsis was more thorough, I am unable to say, but nevertheless there was no swelling of the eye-lids nor orbital tissue, and from present appearances the patient will return home at the end of a two weeks' stay in the hospital.



DR. FOX'S CASE OF EVISCERATION OF THE EYE-BALL.

